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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,530	04/06/2001	Oumar Nabe	17207-00008	6222

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EXAMINER

CHOI, PETER H

ART UNIT	PAPER NUMBER
3623	

DATE MAILED: 07/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/828,530

Applicant(s)

NABE ET AL.

Examiner

Peter Choi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 and 39-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33, 39-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. The following is a **NON-FINAL** office action upon examination of application number 09/828,530. Claims 1-33 and 39-42 are pending in the application and have been examined on the merits discussed below. Applicant's amendment was submitted July 3, 2006.

### *Response to Arguments*

2. Applicant's argument with respect to the Samra et al. reference (U.S Patent #6,970,892) is persuasive and has been withdrawn.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-33 and 39-44 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in

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the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1, 11, 21, 26, 30, and 39 recite “inactive” customers. The specification does not clearly define an “inactive” customer. A clear distinction between “active” and “inactive” customers is required, as they appear to be distinct groups with different propensity models applied to each type of customer. At what point is a customer considered to be “inactive”? For example, a customer who has not conducted any business with an enterprise during the most recent 6-month period may be considered “inactive”, but a customer who has conducted business with the same enterprise within 5 months may be considered “active”.

Claims 2-10, 12-20, 22-25, 27-29, 31-33, and 40-44 are dependent on claims 1, 11, 21, 26, 30, and 39 and thus are also rejected.

### ***Claim Rejections - 35 USC § 101***

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Under the statutory requirement of 35 U.S.C. § 101, a claimed invention must produce a useful, concrete, and tangible result. For a claim to be useful, it must yield a

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result that is specific, substantial, and credible (MPEP § 2107). A concrete result is one that is substantially repeatable, i.e., it produces substantially the same result over and over again (*In re Swartz*, 232 F.3d 862, 864, 56 USPQ2d 1703, 1704 (Fed. Cir. 2000)). In order to be tangible, a claimed invention must set forth a practical application that generates a real-world result, i.e., the claim must be more than a mere abstraction (*Benson*, 409 U.S. at 71-72, 175 USPQ at 676-77).

Claims 1, 11, 21, 26, 30, and 39 recite “inactive” customers. However, there is no methodology for determining whether customers are “active” or “inactive” in the claims or the specification. Thus, the claims lack a concrete result, as the result of the claimed invention is not substantially repeatable. Without any defined methodology for discerning between “active” and “inactive” customers, it would appear that a human user subjectively makes this determination. Human judgment is significantly affected by one’s personal and unique experiences and opinions, and differs from person to person.

Claims 2-10, 12-20, 22-25, 27-29, 31-33, and 40-44 are dependent on claims 1, 11, 21, 26, 30, and 39 and thus are also rejected.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-33, and 39-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gary Saarevirta's "Data Mining for Direct Mail: A Lesson in Predictive Modeling" (hereinafter referred to as Saarevirta), and further in view of Anderson et al. (U.S Patent #6,078,892) and Blume et al. (U.S Patent #6,839,682).

As per claim 1, Saarevirta teaches a method for generating customer leads for use by dealers attempting to sell a product to a plurality of customers using a computer coupled to a database, said method comprising the steps of:

(a) storing customer information within the database including age, gender, income and payment history for each of the plurality of customers **(by analyzing customer purchasing activity, a business can ensure that customers receive only interesting, relevant, and valuable offers; analyzing transactional information collected and stored in databases)** [Paragraphs 3, 4];

(b) applying propensity models using the computer to one or more customers stored within the database, the propensity models including an early termination model and a cross-selling model, the early termination model for predicting a probability of early termination of a loan by the one or more customers wherein early termination includes a likelihood a customer will terminate a loan provided by the dealer before a contract life of the loan expires by prepaying the loan **(model attrition behavior: which**

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**customers are likely to stop buying your company's products or services?), the cross-selling model for predicting a probability of cross-selling to a predicted early termination customer wherein cross-selling includes a likelihood a customer will purchase another product from the dealer to retain the early termination customer as an active customer of the dealer (data used in the predictive models {the customer universe} was the active customer base that hadn't bought the product the client was trying to cross-sell; when you've completed your predictive model, each customer record will have a score indicating the customer's probability of responding) [Paragraphs 6, 21, 27];**

(c) applying an activation model and a timing model using the computer to one or more customers stored within the database, the activation model for predicting a probability of activating the one or more customers stored within the database including a likelihood that an inactive customer will accept an offer to sell a product from the dealer and become an active customer **(when you've completed your predictive model, each customer record will have a score indicating the customer's probability of responding; once you've determined your customer universe, you can create the model's objective variable. This is the variable that the model will try to predict – for example, the probability a certain customer will respond to our mailing) [Paragraphs 21, 29]; and**

(d) generating a customer lead list including customers satisfying the early termination model and the cross-selling model, or satisfying the activation model, wherein an early termination customer satisfying the cross-selling model is an early

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termination customer predicted to purchase another product from the dealer, and a customer satisfying the activation model is an inactive customer predicted to accept an offer to sell a product from the dealer **{Saarenvirta analyzes transaction information of customers to forecast and model future customer buying behavior and response to direct mail marketing (i.e., cross-selling, response, sales), such customer behavior including attrition (i.e., early termination)}**.

Saarenvirta does not explicitly teach the step of storing information of inactive customers. However, it is old and well known in the business arts that businesses retain information on all customers (for a reasonable length of time), which would include currently active and inactive customers. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Saarenvirta to include all customers (current and past, active and inactive) in an attempt to develop customized marketing strategies and offers with a higher likelihood of customer response, which would lead to increased profits and revenue, and extend the customer relationship.

Saarenvirta does not explicitly teach the step of predicting when customers will accept an offer. However, Blume et al. teaches the step of identifying when customers will respond to an offer **(predicting behavior of the target consumer; predicting spending within a predicted time period)** [Claims 9 and 24].



Both Saarenvirta and Blume et al. are directed towards using predictive modeling of consumer financial behavior to determine likely responses to particular marketing efforts. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Saarenvirta to include the step of predicting when customers will accept an offer because the resulting combination would enable companies sufficient time to develop profitable cross-selling promotions, or targeted proposals (such as lower interest rates and financing charges, etc.), which would reduce the likelihood for customer attrition and extend the customer relationship.

Saarenvirta does not explicitly teach the step of providing the customer lead list to one or more dealers. However, Anderson et al. teaches the step of providing the potential customer list **(outputting the collection of ordered customer records; storing customer list in memory and making it accessible through a LAN, WAN or any other conventional method of interconnecting computers)** to one or more dealers [Claim 1, Column 11, lines 62-65 and Column 12, lines 5-12].

Both Saarenvirta and Anderson et al. are directed towards the analogous art of analyzing data to identify potential customer leads. Saarenvirta lacks the step of providing the generated list of potential customer leads to a dealer, a concept taught by Anderson et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Saarenvirta to include the step of providing the potential customer list to dealers because the resulting combination would

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enable said dealers to proactively develop profitable cross-selling promotions, or targeted proposals (such as lower interest rates and financing charges, etc.), which would reduce the likelihood for customer attrition and extend the customer relationship.

As per claim 2, Saarenvirta does not explicitly teach a method according to claim 1 wherein said step of applying propensity models further comprises the step of identifying early termination customers using a propensity model, wherein the propensity model identifies prepaying customers at least three months before the prepaying customer prepays the loan.

However, Blume et al. teaches the step of predicting user behavior within a certain time period (**predicting behavior of the target consumer; predicting spending within a predicted time period**) [Claims 9 and 24].

Both Saarenvirta and Blume et al. are directed towards using predictive modeling of consumer financial behavior to determine likely responses to particular marketing efforts. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Saarenvirta to include the step of identifying prepaying customers 3 months ahead of time because the resulting combination would enable companies sufficient time to develop profitable cross-selling promotion, or targeted proposals (such as lower interest rates and financing charges, etc.), which would reduce the likelihood for customer attrition and extend the customer relationship.

As per claim 3, Saarenvirta teaches a method according to claim 1 including the step of applying an activation model **(when you've completed your predictive model, each customer record will have a score indicating the customer's probability of responding; once you've determined your customer universe, you can create the model's objective variable. This is the variable that the model will try to predict – for example, the probability a certain customer will respond to our mailing)** [Paragraphs 21, 29].

Saarenvirta does not explicitly teach the use of a timing model to identify when customers will purchase from the dealer. However, Blume et al. teaches the step of identifying when customers will purchase from the dealer **(predicting behavior of the target consumer; predicting spending within a predicted time period)** [Claims 9 and 24].

Both Saarenvirta and Blume et al. are directed towards using predictive modeling of consumer financial behavior to determine likely responses to particular marketing efforts. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Saarenvirta to include the timing model as taught by Blume et al. since the resulting method would provide for a more efficient, effective, and robust approach towards marketing, resource requirements, client needs and market share, which would lead to increased profits and revenue.

As per claim 4, Saarenvirta does not explicitly teach a method according to claim 1 wherein said step of storing customer information further comprises storing the customer information including customer information on at least one of active customer files and inactive customer files.

However, it is old and well known in the business art that companies retain customer information for all customers (for a reasonable length of time), which would include currently active and inactive customers. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Saarenvirta to include all customers (current and past, active and inactive) in an attempt to develop marketing strategies and offers with a higher likelihood of customer response, which would lead to increased profits and revenue, and extend the customer relationship lifetime.

As per claim 5, although not explicitly taught by the combined teachings of Saarenvirta and Anderson et al., Blume et al. teaches a method according to claim 1 wherein said step of generating a customer lead list further comprises the steps of:

(a) clustering customers into customer groups according to customer characteristics (**generating groups based on the analysis of consumer financial behavior**) [Column 3, lines 20-26]; and

(b) identifying specific needs (**underlying consumer interests**) for each customer group [Column 3, lines 25-26].

Saarenvirta, Anderson et al., and Blume et al. are all directed towards the analogous art of applying marketing models and metrics to customer data to yield customer leads. The combined teachings of Saarenvirta and Anderson et al. analyze customers on an individual level, and do not cluster customers into groups, a concept taught by Blume et al. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Saarenvirta include the clustering step as taught by Blume et al. in order to create specialized targeted offers best suited to meet the specific needs of customers based on the customer segment they are clustered into.

As per claim 6, although not explicitly taught by Saarenvirta, Anderson et al. teaches a method according to claim 1 wherein said step of providing the customer lead list further comprises the step of:

(a) holding the customer list (**stored on memory**) on a web-based system (**accessible through a LAN, WAN, or any other conventional method of interconnecting computers**) [Column 11, lines 62-65, Column 12, lines 5-12]; and

Although not explicitly taught by Saarenvirta or Anderson et al., the step of providing users with access to a web-based system is old and well known in the art.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the combined teachings of Saarevirta and Anderson et al. to provide users with access to a web-based system containing a customer list because the resulting combination would provide the user with a convenient means of accessing information, and the use of web-based systems further provides users with user accounts (complete with passwords and data encryption methods) that enable secure access to the customer lead information that would prevent unauthorized users from viewing sensitive proprietary data.

As per claim 7, although not explicitly taught by Saarevirta, Anderson et al. teaches a method according to claim 1 wherein said step of providing the customer lead list further comprises the step of providing dealer access to the customer list through a telephone based system (**land-based telephone line, or cellular line**) [Column 12, lines 11-12].

As per claim 8, Saarevirta does not explicitly teach a method according to claim 1 wherein said step of providing the customer lead list further comprises the step of mailing the customer list to the dealers through at least one of electronic-mail, the postal service, and a courier service.

However, the concept of mailing information to customers via electronic mail, the postal service, or a courier service are direct marketing concepts that are old and well

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known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the teachings of Saarenvirta to include the physical delivery of the potential customer list in order to enable the company to provide such information to individuals incapable or unwilling to view the information using digital or telephonic methods.

As per claim 9, although not explicitly taught by Saarenvirta, Anderson et al. teaches a method according to claim 1 further comprising the step of providing results of customer contacts generated from the customer lead list to the database of customer information **(storing data records satisfying one or more traits in the storage device or other memory)** [Column 5, lines 45-47].

As per claim 10, Saarenvirta teaches a method according to claim 1 wherein said step of providing the customer lead list further comprises the step of determining which customers will respond to a dealer initiated contact using a direct response model **(when you've completed your predictive model, each customer record will have a score indicating the customer's probability of responding; once you've determined your customer universe, you can create the model's objective variable. This is the variable that the model will try to predict – for example, the probability a certain customer will respond to our mailing)** [Paragraphs 21, 29].

Claims 11-33 and 39-42 recite limitations similar to those of claims 1-10 above; therefore, the same rejection applies.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

McCausland et al. (U.S Patents #5,822,410 and 6,049,599) teach a churn amelioration system and method. An extensive database of customer data is maintained, and rules are established for predicting the likelihood of churn.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Choi whose telephone number is (571) 272 6971. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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PC

July 21, 2006

Peter Choi  
Examiner  
Art Unit 3623

*(C. Michelle Tarae)*

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